Patient-Administered, Computerized Questionnaire to Support Hormone Replacement Therapy Decision Making

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Objective: To evaluate the acceptability and reliability of a computerized, patient-administered information gathering and analysis system that generates personalized decision aids for women considering hormone replacement therapy (HRT).

Intervention: The *HealthQuiz*® (a laptop computer (HQ) for interactive, branching, patient-administered health histories) gathers health risk and preference data that pertains to decisions about short or long term HRT for peri-menopausal women. The computer prints chart-ready health summaries and recommendations based on American College of Physicians practice guidelines. The program generates a customized "Decision Board" (DB) which charts major risks and benefits of HRT adjusted for individual indications, contraindications, preferences and health risks.

Study design: Consecutive women (age 31-79) attending a family practice clinic, community-based general practice, a women' s clinic and an osteoporosis clinic were invited to use the HQ and DB. In Phase I, HQ reliability testing, adult females were recruited to complete a randomly allocated subset of the HQ questionnaire twice, before and immediately after their clinic visit. Each patient was randomized to 1 of 4 groups where G1= interviewer/interviewer (I/I), G2 = I/ HQ, G3 = HQ/I, G4 = HQ/HQ. Major discrepancies in answers (Y→N, N→Y) between time 1 and time 2 were used as a measure of reliability. In Phase II, HQ acceptability testing, adult females were recruited to complete the entire HQ and then answer a written Satisfaction questionnaire. In Phase III, DB acceptability and reliability testing, adult females were recruited to complete 2 interviews using the DB, two weeks apart.

Results: Phase I: 95 women, mean age 57 years, completed the test/retest interviews. The test sites and 4 groups were similar with respect to age and # of questions answered. There was a statistically significant difference in the distribution of discrepancies among the 4 groups (χ^2=9.4, p=0.02), with the H/I group having the highest discrepancy rate (.032) and the I/I group having the lowest (.014). There are significantly fewer discrepancies in questions of personal health when compared to menstrual health and questions of activity level and ability.

Phase II: 93 women, mean age 56 years, answered the HQ-HRT questionnaire. Patients at different settings were similar in age, number of questions answered and time to complete. On average 181 questions were answered in 21 minutes, with older women taking longest. Older patients were more likely to give "not sure" responses, especially to questions on family history of hypercholesterolemia. 92% of respondents reported no difficulty answering questions or using the computer and 83% felt their answers gave new information their doctors should know.

Phase III: 32 women, mean age 52 years, completed test-retest interviews about their reactions to the Decision Board. Forty-seven percent would choose short-term hormone replacement for symptomatic relief and 66% would choose hormone replacement for long-term, prophylactic therapy based on the information presented on the Decision Board at the first interview. 80% made the same choice at a retest interview 2 weeks later.

Conclusions: The computerized health risk questionnaire to support HRT decisions and the communication/decision aid are well accepted by patients. Both tools provide a standardized, highly consistent method of obtaining complex and often embarrassing information in a fast, non-threatening manner while generating immediate, easy to understand feedback for both the clinician and patient. The stored data is a reliable, and constantly expanding, source for future assessment of the chosen medical intervention.

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